

APR 21 2008Translation of Abstract of Rogier Reference (EP 1043658)

A process for improving the performance of a multiprocessor system comprising a job queue and a system architecture for implementation of the process.

The invention is concerned with a process for the allocation of tasks in a multiprocessor system for processing numerical data with a preemptive operating system and an architecture for implementation of this process. The system comprising processors (200-203 and 210-213) capable of processing tasks in parallel, distributed in groups (200-201, 202-203). An elementary queue (5_a , 5_b) is associated with each of the groups of processors (200-201, 202-203) and records tasks to be performed. All the tasks to be performed (T_1 to T_{10}) are recorded in a table (4). Each of the tasks (T_1 to T_{10}) in the table (4) is associated with one of the queues (5_a , 5_b), and each of the tasks recorded in the queues (5_a , 5_b) is associated with one of the processors (200 to 201). The associations are made by sets of crossed pointers (p_{200} to p_{203} , $pp5_a$, $pp5_b$, pT_1 , pT_5 , pT_{10} , $p5a1$ to $p5a4$, $p5b1$ to $p5b10$). In a further embodiment, in accordance with a number of variants, a (re)-balancing of the load of the system is carried out between elementary queues.